

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000494**Date Inspected:** 22-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Xu Le Feng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 114 D / 77 A**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to observe the Ultrasonic Testing (UT) of the Caltrans Mock-up #77.00 and monitoring of welding operations on Mock-up #114.00, for the San Francisco Oakland bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector observed ZPMC QC performing UT on Mock-up #77.00 Skin Plate A Sub Assembly MA2 weld joint #1,2,3 and 4. Caltrans QA observed ZPMC QC inspector Mr. Xu Le Feng monitoring welding parameters of # 114.00 Skin D Lower Section MA 110 weld #1.

Caltrans QA Inspector observed ZPMC QC, Mr. Li Li Ming and Ms. E Shuiqin performed Ultrasonic Testing on Mock-up 77.00. The following picture below illustrates the ultrasonic test in progress. Mr. Li Liming performed straight beam and 45 degree shear wave testing of #77.00 Skin Plate A weld joints. Ms. E Shui Qin performed the 70 degree Shear wave testing. At the conclusion of testing ZPMC QC technicians found weld joint # 1 acceptable. Welds 2, 3 and 4 were rejected. ZPMC reported weld # 3 to have 85% of it length classified as a class A reject, which exceeds the maximum length specified by the special provisions. Welds # 2 and # 4 were reported to have indications which exceed the acceptance criteria of table 6.3 of AWS D1.5. Indications of welds # 2 and # 4 do not exceed 10% of its length as reported by ZPMC.

Caltrans QA observed ZPMC QC Mr. Cui Yiru monitoring Submerged Arc Welding of # 114.00 Skin D Sub Assembly MA110. ZPMC welder Wu Zhibin performed the welding in conformance to WPS-B-T-2321-B-P3-S weld # 1. Caltrans QA recorded the flowing welding variables, 33 Volts, 650 Amps, travel speed of 605 with a heat input of 2.12 kJ/mm.

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The Caltrans QA Inspector observed the ultrasonic examinations of #77.00 Skin A stiffener CJP welds and the welding operations of 114 Skin D sub assembly MA 110. Caltrans QA Inspector observed that the welding and ultrasonic testing appear to be in general conformance with AWS D1.5 2002 requirements.



Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Viars, Larry	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
